

NAVY MEDICINE AND THE INVESTIGATION ON THOMPSON'S ISLAND, 1823

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When the United States acquired the Spanish colony of Florida in 1821, Key West was nothing more than a sleepy fishing village known originally known as Cayo Huesa ("Bone Reef"). Seeing the strategic value of the property, the Navy took control over Key West in March 1822 and renamed it "Thompson's Island" in honor of the Secretary of the Navy, Smith Thompson.

For a time, Thompson's Island was the home of the Navy's West Indies Squadron and its base of operations in a campaign against the last vestige of Caribbean pirates. It was not long however before disease overtook piracy as the greatest threat to the squadron.

In 1823, Thompson's Island served as the site for one of the first military medical investigations into the cause of Yellow Fever.

The trouble began on August 19, 1823 when a sailor from the schooner USS *Decoy* came ashore suffering muscle aches and gastrointestinal pain. Surgeon Mordecai Morgan, USN, the patient's attending physician, found the sailor's skin cool and clammy; his respiration short, his "vomit black," "yellowness was diffused over his face, neck and breast," "Blood oozed out from every little pimple and abrasion of the surface" and "he had all the usual precursory signs of death."



Vintage Sketch of Thompson's Island (Key West)

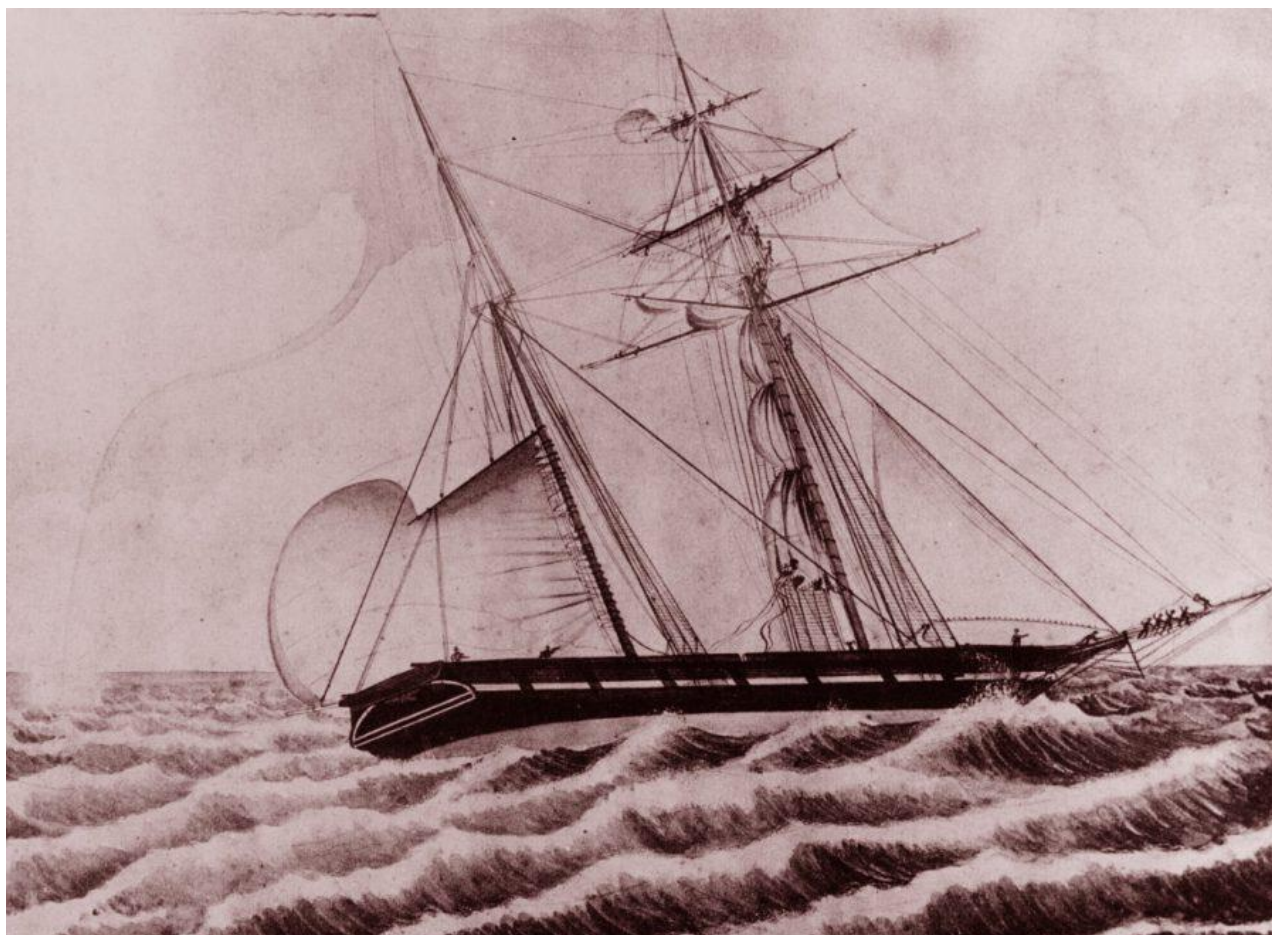
Courtesy of the Naval History and Heritage Command

The sickness soon spread throughout the island. Within a week over 30 sailors and Marines were stricken with Yellow Fever. Even Commodore David Porter, commander of the naval station, was reported to be in a “state of great debility.”

On September 21st, the new Secretary of the Navy, Samuel Southard reported to President James Monroe that 11 sailors had died on Thompson's Island and at least 21 others, including the station's surgeons, were sick.

Southard ordered a special Navy mission to Thompson's Island to “investigate with utmost care the origins, progress and present state of the sickness which prevails on the island and in the Squadron.”

Commodore John Rodgers, USN was assigned with overseeing a team—what we would now call a “medical task force”—comprised of three of the Navy's most accomplished physicians—Surgeons Thomas Harris, Richard K. Hoffman, and Bailey Washington. Each were assigned to Rodgers aboard the schooner *USS Shark*.

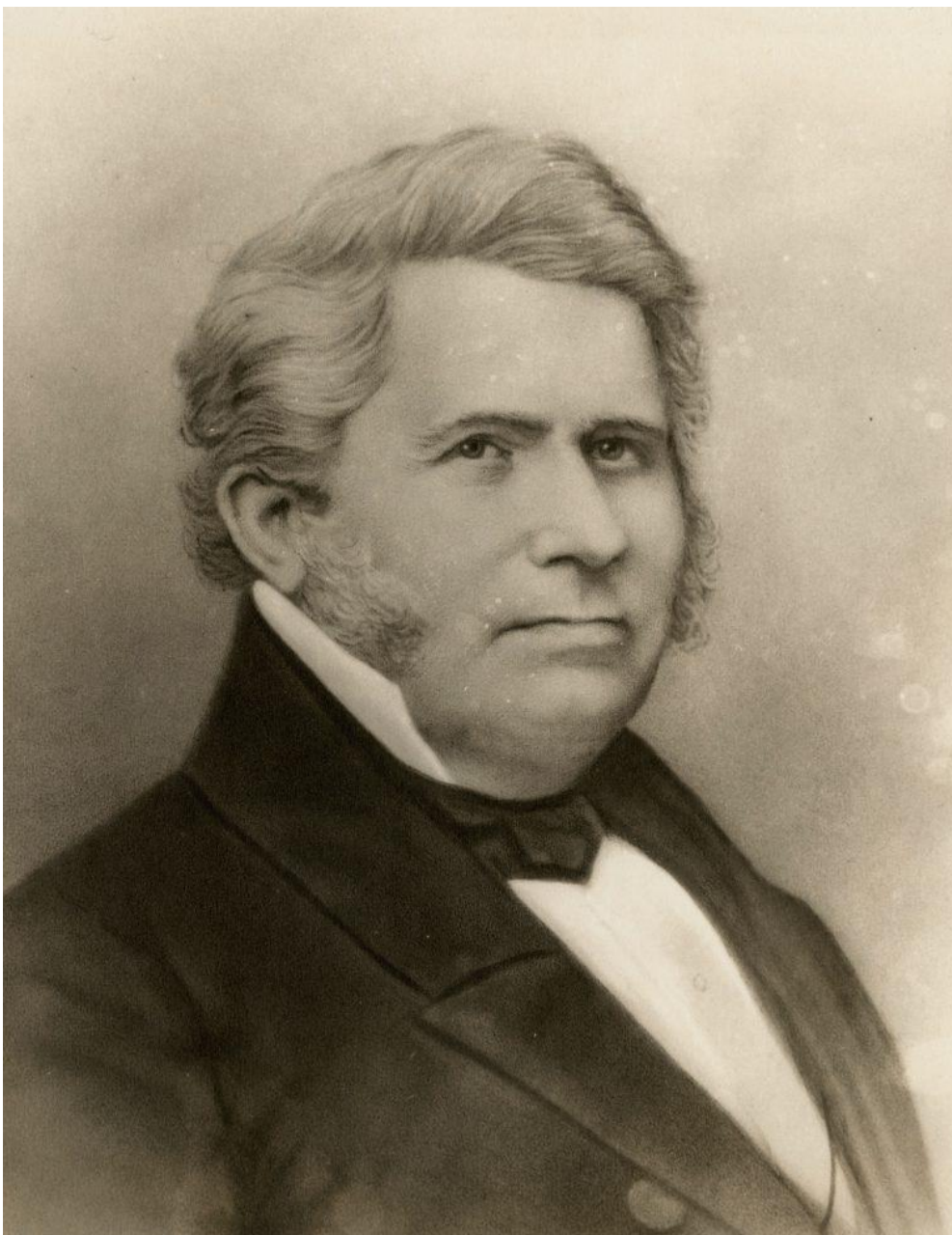


The schooner USS Shark, ca. 1820s. This ship would carry Rodgers and his medical team to Thompson's Island to investigate the cause of the disease outbreak.

Courtesy of Naval History and Heritage Command

Rodgers and his medical team arrived on the island on October 23, 1823 only to discover that Commodore Porter and much of the station had fled the sickness. Of the 140 sailors and Marines remaining, 59 were sick with fever, several of whom were being treated at the makeshift hospital under the care of Surgeon Thomas Williamson, USN. Rodgers noted that the fever had become quite mild, but also the sailors had become quite “unruly” in Porter’s absence.

The medical team walked the island studying every topographical feature and collected clues with the thoroughness of forensic scientists. They noted that over half the island was covered in salt water and fresh water ponds, the latter being covered with decomposing vegetable and animal matter; they suspected the resulting “miasma” (literally “bad air”) would have had a powerful effect on the populace and their health.



Surgeon Thomas Harris, USN, one of three physicians who investigated the cause of the outbreak at the behest of Secretary of the Navy, Samuel Southard. *BUMED Archives*

The surgeons submitted a report to Secretary Southard on October 29th outlining six causes of the Yellow Fever outbreak:

1. "From sudden exposure of Northern constitutions to a tropical climate a period when the ordinary relaxing effects of a change from a cold to a warm season were aggravated by a difference of fourteen or fifteen degrees southern latitude. From this cause, they were, in the space of two or three weeks, operated upon by an increase of temperature of at least fifty degrees."
2. "From the great fatigue and exposure, by day and night, of officers and crews engaged in the boat service, and from want of comfortable quarters for those who encamped on the island."
3. "From irregular, and frequently, intemperate habits."
4. "From being often deprived of fresh and wholesome provisions."
5. "From continued annoyance of Moschetoës [sic] and sand-flies, which deprived the men of their accustomed rest."
6. "From being operated upon the depressing passions, arising from apprehension awakened by the prevailing epidemic and by the obvious want of comfort of those who here affected with disease."

Most interestingly, the surgeons noted that the disease only seemed to be present when the temperature exceeded fifty degrees. It could be argued that they were just twelve degrees away from a significant breakthrough. Mosquitoes will not bite when the temperatures drop below 62 degrees Fahrenheit.



Portrait of Surgeon Bailey Washington, USN *Courtesy of the Smithsonian American History Museum*

Although the fever on the island subsided as the weather cooled, at least 21 officers and an untold number of enlisted, died during the outbreak. Others would follow when Spring and Summer returned and temperatures grew warmer.

President James Monroe later praised Commodore Rodgers and the “skilful” [sic] surgeons in his address to Congress in December 1823.

Harris, Hoffman, and Washington had gone as far as medical science could (or went) without pinpointing the mosquito as the sole cause of the epidemic. Science was still 77 years away before identifying the *Aedes Egypti* as the purveyor of Yellow Fever.

Postscript:

The future of the naval station remained in question until another Yellow Fever epidemic led to string of agonizing deaths in 1824.

On May 24, 1825, Secretary Southard ordered Commodore Lewis Warrington, the new Commander of the West Indies Squadron, to relocate the station to a West Florida town called Pensacola. A year later, in December 1826, the Navy officially disestablished its base on Thompson's Island.

"Thompson's Island" again became Key West after the Navy shipped out. It would take another 30 years before the Navy would again return to its original base of operations in Florida.

Yellow Fever remained a significant threat for the Navy for much of the nineteenth century. Even as casualties by gunfire, and cannon amounted over the course of the century's conflicts, the proboscis of a disease carrying insect was in many respects the deadliest weapon of them all throughout the century.

In the Mexican War (1846-1848), an estimated 13 percent of US forces (11,000) died of disease, chief among them Yellow Fever. At the US Naval Hospital on Salmandina Island, off of Veracruz, Mexico, US naval surgeons were overwhelmed with Army, Navy and Marine Corps victims of the yellow scourge; many including the Navy's senior physician in theater—Fleet Surgeon John A. Kearney—died from the disease.

And generations before the microbe hunters and long before mosquito control was a preventive measure, military surgeons treated mosquito-borne illnesses with the tried and well-meaning methods of their day. Typically, these were Mercury-based purgatives/emetics, venesection, and blistering/cupping—all based on ancient theories of bodily humors and temperaments; and all were designed to rid the underlying cause of disease.

In the late nineteenth century, a Navy surgeon named John Bransford came close to connecting mosquitoes with Yellow Fever when he noted that mosquito nets could prevent febrile illnesses. But it would take the work of Dr. Carlos Finlay and later the Army Medical Commission (aka, the Yellow Fever Commission)—led by Dr. Walter Reed—before it was confirmed that Yellow Fever was indeed transmitted by mosquitos.

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